

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method of automatically generating a configuration for a network device, the method comprising the computer-implemented steps of:  
receiving a partial configuration for a network device, wherein the partial configuration comprises a plurality of configuration commands, wherein each of one or more of the configuration commands is associated with one of a plurality of user interface elements;  
parsing the partial configuration to identify the user interface elements;  
generating a local user interface page based on the user interface elements;  
receiving one or more configuration parameter values via the user interface page; and  
substituting the configuration parameter values into the partial configuration to result in creating a complete configuration for the device;  
wherein the partial configuration is at least partially customized with one or more configuration parameter values specific to a network service provider prior to shipment of the network device to a user.
2. (Original) A method as recited in Claim 1, wherein the partial configuration is stored in non-volatile memory of the network device prior to shipment of the network device to a user.
3. (Original) A method as recited in Claim 1, wherein the partial configuration comprises an electronic configuration template that is stored in non-volatile memory of the network device prior to shipment of the network device from a service provider or vendor to a user.
4. (Original) A method as recited in Claim 1, wherein the network device comprises a customer premises equipment (CPE) device.

5. (Original) A method as recited in Claim 1, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value.
6. (Original) A method as recited in Claim 5, wherein the user interface string value comprises a sequence of characters for display in the user interface page as part of a prompt for entering an associated configuration parameter value.
7. (Original) A method as recited in Claim 5, wherein the data type value specifies a data type associated with the user interface element for use in determining validity of the received configuration parameter values.
8. (Original) A method as recited in Claim 7, wherein the data type value is selected from among a set consisting of IP address, subnet mask, dial pattern, virtual channel identifier, virtual path identifier, username, password, gateway, hostname, group name, group key, and peer IP address.
9. (Original) A method as recited in Claim 1, wherein the partial configuration further comprises one or more dynamic tags that are not associated with user interface elements, and wherein the method further comprises the steps of:  
parsing the partial configuration to identify the dynamic tags;  
substituting a configuration parameter value for each of the dynamic tags as part of the complete configuration.
10. (Original) A method as recited in Claim 1, wherein each of the user interface elements comprises a user interface string value, and wherein the step of generating a user interface page comprises the steps of:  
generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value; and

causing the network device to display the electronic document using the end user computer system.

11. (Original) A method as recited in Claim 1, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value, and wherein the method further comprises the steps of:  
 generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value;  
 causing the network device to display the electronic document using the end user computer system;  
 associating one of the configuration parameter values with the data variable name; and  
 determining whether a data type of the one of the configuration parameter values matches the data type value.
  
12. (Previously Presented) A method of automatically generating a network device configuration, the method comprising the computer-implemented steps of:  
 reading a configuration template from non-volatile memory of a network device, wherein the configuration template comprises a plurality of configuration commands, wherein each of one or more of the configuration commands is associated with one of a plurality of user interface elements, wherein the configuration template is stored in the memory prior to movement of the network device from a vendor or service provider to a user;  
 parsing the configuration template to identify one or more user interface elements;  
 generating a local user interface page based on the user interface elements;  
 receiving one or more configuration parameter values from a user of the network device via the user interface page; and  
 substituting the configuration parameter values into the configuration template in association with the configuration commands to result in creating and storing a complete configuration for the device;

wherein the configuration template is at least partially customized with one or more configuration parameter values specific to a network service provider.

13. (Original) A method as recited in Claim 12, wherein the network device comprises a customer premises equipment (CPE) device.
14. (Original) A method as recited in Claim 12, wherein each of the user interface elements comprises a data variable name, a user interface string value, a data type value, and a settings type value.
15. (Original) A method as recited in Claim 14, wherein the user interface string value comprises a sequence of characters for display in the user interface page as part of a prompt for entering an associated configuration parameter value.
16. (Original) A method as recited in Claim 14, wherein the data type value specifies a data type associated with the user interface element for use in determining validity of the received configuration parameter values.
17. (Original) A method as recited in Claim 16, wherein the data type value is selected from among a set consisting of IP address, subnet mask, dial pattern, virtual channel identifier, virtual path identifier, username, password, gateway, hostname, group name, group key, and peer IP address.
18. (Original) A method as recited in Claim 12, wherein the configuration template further comprises one or more dynamic tags that are not associated with user interface elements, and wherein the method further comprises the steps of:  
parsing the configuration template to identify the dynamic tags;  
substituting a configuration parameter value for each of the dynamic tags as part of the complete configuration.

19. (Original) A method as recited in Claim 12, wherein each of the user interface elements comprises a user interface string value, and wherein the step of generating a user interface page comprises the steps of:
- generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value; and
- causing the network device to display the electronic document using the end user computer system.
20. (Original) A method as recited in Claim 12, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value, and wherein the method further comprises the steps of:
- generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value;
- causing the network device to display the electronic document using the end user computer system;
- associating one of the configuration parameter values with the data variable name; and
- determining whether a data type of the one of the configuration parameter values matches the data type value.
21. (Previously Presented) A computer-readable medium carrying one or more sequences of instructions for automatically generating a configuration for a network device, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
- receiving a partial configuration for a network device, wherein the partial configuration comprises a plurality of configuration commands, wherein each of one or more of the configuration commands is associated with one of a plurality of user interface elements;
- parsing the partial configuration to identify the user interface elements;

generating a local user interface page based on the user interface elements;  
receiving one or more configuration parameter values via the user interface page; and  
substituting the configuration parameter values into the partial configuration to result in  
creating a complete configuration for the device;  
wherein the partial configuration is at least partially customized with one or more  
configuration parameter values specific to a network service provider prior to  
shipment of the network device to a user.

22. (Original) A computer-readable medium as recited in Claim 21, wherein the partial configuration is stored in non-volatile memory of the network device prior to shipment of the network device to a user.
23. (Original) A computer-readable medium as recited in Claim 21, wherein the partial configuration comprises an electronic configuration template that is stored in non-volatile memory of the network device prior to shipment of the network device from a service provider or vendor to a user.
24. (Original) A computer-readable medium as recited in Claim 21, wherein the network device comprises a customer premises equipment (CPE) device.
25. (Original) A computer-readable medium as recited in Claim 21, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value.
26. (Original) A computer-readable medium as recited in Claim 25, wherein the user interface string value comprises a sequence of characters for display in the user interface page as part of a prompt for entering an associated configuration parameter value.

27. (Original) A computer-readable medium as recited in Claim 25, wherein the data type value specifies a data type associated with the user interface element for use in determining validity of the received configuration parameter values.
28. (Original) A computer-readable medium as recited in Claim 27, wherein the data type value is selected from among a set consisting of IP address, subnet mask, dial pattern, virtual channel identifier, virtual path identifier, username, password, gateway, hostname, group name, group key, and peer IP address.
29. (Original) A computer-readable medium as recited in Claim 21, wherein the partial configuration further comprises one or more dynamic tags that are not associated with user interface elements, and wherein the method further comprises the steps of:  
parsing the partial configuration to identify the dynamic tags;  
substituting a configuration parameter value for each of the dynamic tags as part of the complete configuration.
30. (Original) A computer-readable medium as recited in Claim 21, wherein each of the user interface elements comprises a user interface string value, and wherein the step of generating a user interface page comprises the steps of:  
generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value; and  
causing the network device to display the electronic document using the end user computer system.
31. (Original) A computer-readable medium as recited in Claim 21, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value, and wherein the method further comprises the steps of:

generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value;  
 causing the network device to display the electronic document using the end user computer system;  
 associating one of the configuration parameter values with the data variable name; and  
 determining whether a data type of the one of the configuration parameter values matches the data type value.

32. (Previously Presented) An apparatus for automatically generating a configuration for a network device, comprising:  
 means for receiving a partial configuration for a network device, wherein the partial configuration comprises a plurality of configuration commands, wherein each of one or more of the configuration commands is associated with one of a plurality of user interface elements;  
 means for parsing the partial configuration to identify the user interface elements;  
 means for generating a local user interface page based on the user interface elements;  
 means for receiving one or more configuration parameter values via the user interface page; and  
 means for substituting the configuration parameter values into the partial configuration to result in creating a complete configuration for the device;  
 wherein the partial configuration is at least partially customized with one or more configuration parameter values specific to a network service provider prior to shipment of the network device to a user.
33. (Original) An apparatus as recited in Claim 32, wherein the partial configuration is stored in non-volatile memory of the network device prior to shipment of the network device to a user.



34. (Original) An apparatus as recited in Claim 32, wherein the partial configuration comprises an electronic configuration template that is stored in non-volatile memory of the network device prior to shipment of the network device from a service provider or vendor to a user.
35. (Original) An apparatus as recited in Claim 32, wherein the network device comprises a customer premises equipment (CPE) device.
36. (Original) An apparatus as recited in Claim 32, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value.
37. (Original) An apparatus as recited in Claim 36, wherein the user interface string value comprises a sequence of characters for display in the user interface page as part of a prompt for entering an associated configuration parameter value.
38. (Original) An apparatus as recited in Claim 36, wherein the data type value specifies a data type associated with the user interface element for use in determining validity of the received configuration parameter values.
39. (Original) An apparatus as recited in Claim 38, wherein the data type value is selected from among a set consisting of IP address, subnet mask, dial pattern, virtual channel identifier, virtual path identifier, username, password, gateway, hostname, group name, group key, and peer IP address.
40. (Original) An apparatus as recited in Claim 32, wherein the partial configuration further comprises one or more dynamic tags that are not associated with user interface elements, and further comprising:  
means for parsing the partial configuration to identify the dynamic tags;

means for substituting a configuration parameter value for each of the dynamic tags as part of the complete configuration.

41. (Original) An apparatus as recited in Claim 32, wherein each of the user interface elements comprises a user interface string value, and wherein the generating means comprises:  
 means for generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value; and  
 means for causing the network device to display the electronic document using the end user computer system.
  
42. (Original) An apparatus as recited in Claim 32, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value, and wherein the apparatus further comprises:  
 means for generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value;  
 means for causing the network device to display the electronic document using the end user computer system;  
 means for associating one of the configuration parameter values with the data variable name; and  
 means for determining whether a data type of the one of the configuration parameter values matches the data type value.
  
43. (Previously Presented) An apparatus for automatically generating a configuration for a network device, comprising:  
 a network interface that is coupled to the data network for receiving one or more packet flows therefrom;  
 a processor;

one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:

receiving a partial configuration for a network device, wherein the partial configuration comprises a plurality of configuration commands, wherein each of one or more of the configuration commands is associated with one of a plurality of user interface elements;

parsing the partial configuration to identify the user interface elements;

generating a local user interface page based on the user interface elements;

receiving one or more configuration parameter values via the user interface page; and

substituting the configuration parameter values into the partial configuration to result in creating a complete configuration for the device;

wherein the partial configuration is at least partially customized with one or more configuration parameter values specific to a network service provider prior to shipment of the network device to a user.

44. (Original) An apparatus as recited in Claim 43, wherein the partial configuration is stored in non-volatile memory of the network device prior to shipment of the network device to a user.
45. (Original) An apparatus as recited in Claim 43, wherein the partial configuration comprises an electronic configuration template that is stored in non-volatile memory of the network device prior to shipment of the network device from a service provider or vendor to a user.
46. (Original) An apparatus as recited in Claim 43, wherein the network device comprises a customer premises equipment (CPE) device.
47. (Original) An apparatus as recited in Claim 43, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value.

48. (Original) An apparatus as recited in Claim 47, wherein the user interface string value comprises a sequence of characters for display in the user interface page as part of a prompt for entering an associated configuration parameter value.
49. (Original) An apparatus as recited in Claim 47, wherein the data type value specifies a data type associated with the user interface element for use in determining validity of the received configuration parameter values.
50. (Original) An apparatus as recited in Claim 49, wherein the data type value is selected from among a set consisting of IP address, subnet mask, dial pattern, virtual channel identifier, virtual path identifier, username, password, gateway, hostname, group name, group key, and peer IP address.
51. (Original) An apparatus as recited in Claim 43, wherein the partial configuration further comprises one or more dynamic tags that are not associated with user interface elements, and wherein the method further comprises the steps of:  
parsing the partial configuration to identify the dynamic tags;  
substituting a configuration parameter value for each of the dynamic tags as part of the complete configuration.
52. (Original) An apparatus as recited in Claim 43, wherein each of the user interface elements comprises a user interface string value, and wherein the step of generating a user interface page comprises the steps of:  
generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value; and  
causing the network device to display the electronic document using the end user computer system.

53. (Original) An apparatus as recited in Claim 43, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value, and wherein the method further comprises the steps of:  
generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value;  
causing the network device to display the electronic document using the end user computer system;  
associating one of the configuration parameter values with the data variable name; and  
determining whether a data type of the one of the configuration parameter values matches the data type value.
54. (Previously Presented) A method of enabling a network service provider to customize a configuration of a network device, the method comprising the computer-implemented steps of:  
creating and storing a partial configuration for a network device within the network device, wherein the partial configuration comprises a plurality of configuration commands, wherein each of one or more of the configuration commands is associated with one of a plurality of user interface elements;  
providing the network device with the partial configuration to an end user, wherein setup of the network device causes the network device to perform the steps of parsing the partial configuration to identify the user interface elements; generating a local user interface page based on the user interface elements; receiving one or more configuration parameter values via the user interface page; and substituting the configuration parameter values into the partial configuration to result in creating a complete configuration for the device;  
wherein the partial configuration is at least partially customized with one or more configuration parameter values specific to the network service provider before providing the device to the end user.

55. (Original) A method as recited in Claim 54, wherein the partial configuration is stored in non-volatile memory of the network device before providing the device to the user.
56. (Original) A method as recited in Claim 54, wherein the partial configuration comprises an electronic configuration template that is stored in non-volatile memory of the network device prior to providing the network device from a service provider or vendor to the user.
57. (Original) A method as recited in Claim 54, wherein the network device comprises a customer premises equipment (CPE) device.
58. (Original) A method as recited in Claim 54, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value.
59. (Original) A method as recited in Claim 58, wherein the user interface string value comprises a sequence of characters for display in the user interface page as part of a prompt for entering an associated configuration parameter value.
60. (Original) A method as recited in Claim 58, wherein the data type value specifies a data type associated with the user interface element for use in determining validity of the received configuration parameter values.
61. (Original) A method as recited in Claim 60, wherein the data type value is selected from among a set consisting of IP address, subnet mask, dial pattern, virtual channel identifier, virtual path identifier, username, password, gateway, hostname, group name, group key, and peer IP address.

62. (Original) A method as recited in Claim 54, wherein the partial configuration further comprises one or more dynamic tags that are not associated with user interface elements, and wherein the method further comprises the steps of:  
parsing the partial configuration to identify the dynamic tags;  
substituting a configuration parameter value for each of the dynamic tags as part of the complete configuration.
63. (Original) A method as recited in Claim 54, wherein each of the user interface elements comprises a user interface string value, and wherein the step of generating a user interface page comprises the steps of:  
generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value; and  
causing the network device to display the electronic document using the end user computer system.
64. (Original) A method as recited in Claim 54, wherein each of the user interface elements comprises a data variable name, a user interface string value, and a data type value, and wherein the method further comprises the steps of:  
generating an electronic document that is displayable by an end user computer system that is communicatively coupled to the network device, wherein the electronic document includes the user interface string value;  
causing the network device to display the electronic document using the end user computer system;  
associating one of the configuration parameter values with the data variable name; and  
determining whether a data type of the one of the configuration parameter values matches the data type value

65. (Previously Presented) A method of enabling a network service provider to customize a configuration of a network device, the method comprising the computer-implemented steps of:
- creating a partial configuration for a network device, wherein the partial configuration comprises a plurality of configuration commands, wherein each of one or more of the configuration commands is associated with one of a plurality of user interface elements;
  - storing the partial configuration in the network device;
  - providing the network device with the partial configuration to an end user, wherein setup of the network device causes the network device to perform the steps of parsing the partial configuration to identify the user interface elements; generating a local user interface page based on the user interface elements; receiving one or more configuration parameter values via the user interface page; and substituting the configuration parameter values into the partial configuration to result in creating a complete configuration for the device; and
  - receiving a configuration request from the device, based on the device operating according to the complete configuration;
- wherein the partial configuration is at least partially customized with one or more configuration parameter values specific to the network service provider before providing the device to the end user.